

Application No. 09/961,255
Reply to Office Action of July 11, 2003

BEST AVAILABLE COPY

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-12 are pending in the present application with Claim 1 having been amended by the present amendment.

In the outstanding Office Action, Claims 1, 3-6 and 9-11 were rejected under 35 U.S.C. § 102(b) as anticipated by Swagten et al.; and Claims 1-3, 5, 6 and 8 were rejected under 35 U.S.C. § 103(a) as unpatentable over Singleton et al.

Applicant thanks the Examiner for the courtesy of an interview extended to Applicant's representative on September 5, 2003. During the interview, the differences between the present invention and the applied art were discussed. No agreement was reached pending the Examiner's further review when a response is filed. Arguments presented during the interview are reiterated below.

In item 34 at page 9 of the outstanding Office Action (i.e., the Examiner's Note), the Examiner indicates if the Applicant wants to require magnetic layer on a substrate such that no other layers can be present between the substrate and the magnetic layer, suitable language would be "a magnetic layer that is formed directly in contact with the surface of a substrate." In light of this indication, Claim 1 has been amended to recite that at least one of the first and second magnetic layers is in direct contact with the electrically conductive, nonmagnetic layer, and has at said contact, a specular reflection for conduction electrons dependent on an orientation of the spin of the conduction electrons relative to a magnetization direction in the first and second magnetic layers.

In a non-limiting example, Figure 2 illustrates at least one of the first and second magnetic layers (R, R') is in direct contact with the electrically conductive, nonmagnetic layer NM and has at the contact, a specular reflection for conduction electrons dependent on

Application No. 09/961,255

Reply to Office Action of July 11, 2003

BEST AVAILABLE COPY

an orientation of the spin of the conduction electrons relative to a magnetization direction in the first and second magnetic layers.

As noted in the previous amendment filed May 2, 2003, Swagten et al. disclose a spin valve device between two insulating layers, e.g., NiO layers (see Figure 1). The specular reflection appears between the lower NiO layer and the lower magnetic layer. The upper NiO layer does not generate specular reflection for technical reasons explained at the end of Swagten et al. That is, the specular reflection at the interface with the nonmagnetic layer is not generated by the magnetic layers of the spin valve, but rather the specular reflection at the interface with the nonmagnetic layers is generated by the lower NiO layer at the interface with the nonmagnetic layer.

Further, Singleton et al. teach specular scattering layers 101, 105 which are not in direct contact with a nonmagnetic layer.

Accordingly, it is respectfully submitted independent Claim 1 and each of the claims depending therefrom are allowable and the rejections noted in the outstanding Office Action have been overcome.

Application No. 09/961,255
Reply to Office Action of July 11, 2003

BEST AVAILABLE COPY

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



22850

Tel: (703) 413-3000
Fax: (703) 413 -2220

\\ATTY\DA\213954US-AM.DOC

Gregory J. Maier
Attorney of Record
Registration No. 25,599

David A. Bilodeau
Registration No. 42,325